

**IN THE CLAIMS**

1. (currently amended) A system for mobile communication based on code division multiple access, comprising:

base stations, each of which communicates with mobile stations by using a plurality of radio frequencies covering respective cells, the respective cells including a first cell covered by a first radio frequency and a second cell covered by a second radio frequency; and

a base-station controller which communicates with said base stations, and controls the mobile stations to switch from the first cell of a first base station to the first cell of a second base station via a soft hand-off operation and switch between the first cell and the second cell within any base station via a hard hand-off operation, said base-station controller providing the mobile stations with no direct switch between the second cell of said first base station and the second cell of said second base station, wherein each of said base stations transmits only the first radio frequency when a number of the mobile stations belonging to the first cell thereof is smaller than a given threshold, and transmits the second radio frequency in addition to the first radio frequency when the number exceeds the given threshold, and wherein said base-station controller controls some of the mobile stations to switch from the first cell to the second cell as transmission of the second radio frequency starts.

2. (original) The system as claimed in claim 1, wherein the first cell is larger than and full encompasses the second cell.

3. – 4. (canceled)

84123459\_1

5. (currently amended) The system as claimed in claim [[4]] 1, wherein the respective cells further include a third cell covered by a third frequency inside the first cell, and each of said base stations does not transmit the third radio frequency when a number of the mobile stations belonging to the second cell thereof is smaller than another given threshold, and transmits the third radio frequency in addition to the second radio frequency when the number exceeds said another given threshold, and wherein said base-station controller controls some of the mobile stations to switch from the second cell to the third cell as transmission of the third radio frequency starts.

6. (currently amended) The system as claimed in claim [[4]] 1, wherein transmission and non-transmission of the second frequency is determined by incorporating a hysteresis characteristic into a relation between the number of the mobile stations and the given threshold.

7. (currently amended) The system as claimed in claim [[4]] 1, wherein a period of transmission and a period of non-transmission of the second frequency is controlled to last for at least a predetermined time period.

8. (canceled)

9. (currently amended) A mobile station for use in the system of claim 1, comprising:  
a searcher which searches for pilot signals of surrounding base stations; and

Serial No. 10/815,032

Page 4 of 13

a searcher-stop-control unit which stops said searcher from searching for the pilot signals when said mobile station is currently using a radio frequency that does not permit a soft hand-off operation.

**10. (currently amended)** A base-station controller for use in the system of claim 1 ~~used in a code division multiple access mobile communication system~~, comprising:

first units, each of which decodes a signal sent from a mobile station, and is provided with a selection function to select said signal from two signals that are sent from the mobile station as a single signal and routed through two respective base stations; and

second units, each of which decodes a signal sent from a mobile station, and is not provided with the selection function,

wherein a mobile station using a radio frequency permitting a soft hand-off operation is assigned to one of said first units, and a mobile station using a radio frequency not permitting a soft-hand-off operation is assigned to one of said second units.

**11. (canceled)**

**12. (original)** A mobile station for use in the system of claim 1, comprising a searcher which searches for pilot signals of the base stations only with respect to the first radio frequency.

**13. (new)** A system for mobile communication based on code division multiple access, comprising:

84123459\_1

Serial No. 10/815,032

Page 5 of 13

base stations, each of which communicates with mobile stations by using a plurality of radio frequencies covering respective cells, the respective cells including a first cell covered by a first radio frequency and a second cell covered by a second radio frequency; and

a base-station controller which communicates with said base stations, and controls the mobile stations to switch from the first cell of a first base station to the first cell of a second base station via a soft hand-off operation and switch between the first cell and the second cell within any base station via a hard hand-off operation, said second cell of said first base station and the second cell of said second base station, wherein the respective cells further include a third cell covered by a third radio frequency and fully encompassed by the second cell, and wherein said base-station controller estimates a position of a mobile station based on received pilot strength of the second radio frequency reported from the mobile station, and controls the mobile station to switch from the second cell to the third cell upon ascertaining that the mobile station is located in the third cell covered by the third radio frequency.

**14. (new)** The system as claimed in claim 13, wherein the first cell is larger than and fully encompasses the second cell.

**15. (new)** A system for mobile communication based on code division multiple access, comprising:

base stations, each of which communicates with mobile stations by using a plurality of radio frequencies covering respective cells, the respective cells including a first cell covered by a first radio frequency and a second cell covered by a second radio frequency, the first cell being larger than and fully encompassing the second cell; and

84123459\_1

Serial No. 10/815,032

Page 6 of 13

a base-station controller which communicates with said base stations, and controls the mobile stations to switch from the first cell of a first base station to the first cell of a second base station via a soft hand-off operation and switch between the first cell and the second cell within any base station via a hard hand-off operation, said base-station controller providing the mobile stations with no direct switch between the second cell of said first base station and the second cell of said second base station, wherein each of said base stations stops transmitting the second radio frequency when a number of the mobile stations engaged in an ongoing call becomes smaller than a given threshold.

84123459\_1